

In the Claims

The following is a complete listing of claims.

1. (currently amended): A method for determining whether ~~an~~ a radio frequency identification device is detected, the method comprising:

selecting a plurality of different antenna patterns from a predetermined multiplicity of antenna patterns;

determining a plurality of binary results each responsive to whether a respective communication link provides a respective signal having a respective amplitude exceeding a respective threshold, each communication link operative in accordance with at least one of the selected antenna patterns;

selecting, from a plurality of predetermined methods, a method for forming a logical combination; and

determining that the radio frequency identification device is detected in accordance with performing the method to form a logical combination in accordance with the plurality of binary results.

2. (currently amended): The method of claim 1 wherein ~~the first~~ each respective threshold is equal to ~~the second~~ a common threshold value.

3. (original): The method of claim 1 wherein at least one of the respective communication links comprises:

a. a receiver; and

b. an antenna coupled to the receiver, wherein the antenna and the receiver cooperate in accordance with the respective antenna pattern.

4. (original): The method of claim 1 wherein at least one of the respective communication links comprises:

a. a transmitter; and

b. an antenna coupled to the transmitter, wherein the antenna and the transmitter cooperate in accordance with the respective antenna pattern.

5. (original): The method of claim 1 wherein each selected antenna pattern has a different polarization.

6. (original): The method of claim 1 wherein each selected antenna pattern has a different direction of maximum effectiveness as an antenna.

7. (original): The method of claim 1 wherein at least one of the predetermined methods provides the logical combination in accordance with a logical OR of at least two of the plurality of binary results.

8. (original): The method of claim 1 wherein at least one of the predetermined methods provides the logical combination in accordance with a logical AND of at least two of the plurality of binary results.

9. (original): The method of claim 1 wherein R1, R2, R3, and R4 represent four results of the plurality of binary results, at least one of the predetermined methods provides the logical combination in accordance with the logical expression: (R1 OR R2) AND (R3 OR R4).

10. (original): The method of claim 1 wherein R1, R2, R3, and R4 represent four results of the plurality of binary results, at least one of the predetermined methods provides the logical combination in accordance with the logical expression: (R1 AND R2) OR (R3 AND R4).

11. (original): The method of claim 1 wherein at least one of the predetermined methods provides the logical combination in accordance with whether a sum of the plurality of binary results exceeds a predetermined quantity.

12. (new): A memory comprising indicia of instructions for performing the method of claim 1 by a data processing circuit.

13. (new): An object identification system comprising:

means for selecting a plurality of different antenna patterns from a predetermined multiplicity of antenna patterns;

means for determining a plurality of binary results each responsive to whether a respective communication link provides a respective signal having a respective amplitude exceeding a respective threshold, each communication link operative in accordance with at least one of the selected antenna patterns;

means for selecting, from a plurality of predetermined methods, a method for forming a logical combination; and

means for determining that the radio frequency identification device is detected in accordance with performing the method to form a logical combination in accordance with the plurality of binary results.

14. (new): The system of claim 13 wherein R1, R2, R3, and R4 represent four results of the plurality of binary results, at least one of the predetermined methods provides the logical combination in accordance with the logical expression: $(R1 \text{ OR } R2) \text{ AND } (R3 \text{ OR } R4)$.

15. (new): The system of claim 13 wherein R1, R2, R3, and R4 represent four results of the plurality of binary results, at least one of the predetermined methods provides the logical combination in accordance with the logical expression: $(R1 \text{ AND } R2) \text{ OR } (R3 \text{ AND } R4)$.

16. (new): A method for determining whether an identification device is detected, the method performed by a monitor in a system having a diversity for communication between the monitor and the identification device, the method comprising:

providing indicia of a plurality of independent variables according to the diversity;
determining a plurality of binary results comprising a respective binary result for each independent variable;

selecting, from a plurality of predetermined methods, a method for forming a logical combination; and

determining that the identification device is detected in accordance with performing the method to form a logical combination in accordance with the plurality of binary results.

17. (new): The method of claim 16 wherein the diversity comprises communication media diversity.

18. (new): The method of claim 17 wherein the plurality of independent variables comprises a first independent variable responsive to electric field energy and a second independent variable responsive to magnetic field energy.

19. (new): The method of claim 16 wherein the diversity comprises communication directional diversity.

20. (new): The method of claim 16 wherein the diversity comprises communication signal magnitude diversity.

21. (new): The method of claim 20 wherein the plurality of independent variables comprises a first independent variable responsive to signals in a first range of magnitude and a second independent variable responsive to signals in a second range of magnitude.

22. (new): The method of claim 16 wherein the diversity comprises communication signal polarization diversity.

23. (new): The method of claim 16 wherein the diversity comprises communication signal timing diversity.
24. (new): The method of claim 23 wherein the plurality of independent variables comprises a first independent variable responsive to line of sight communication and a second independent variable responsive to reflected communication.
25. (new): The method of claim 23 wherein the plurality of independent variables comprises respective independent variables responsive to repeated communication.
26. (new): The method of claim 16 wherein the diversity comprises communication signal modulation diversity.
27. (new): The method of claim 16 wherein the diversity comprises communication via redundant elements of the system.
28. (new): The method of claim 27 wherein redundant elements respectively perform a common function in parallel.
29. (new): A memory comprising indicia of instructions for performing the method of claim 16 by a data processing circuit.
30. (new): An object identification system that determines whether an identification device is detected, the system comprising:
- means for providing a diversity for communication with the identification device;
 - means for providing indicia of a plurality of independent variables according to the diversity;
 - means for determining a plurality of binary results comprising a respective binary result for each independent variable;
 - means for selecting, from a plurality of predetermined methods, a method for forming a logical combination; and
 - means for performing the method to form a logical combination in accordance with the plurality of binary results to determine that the identification device is detected.